

Ubiquitous CM & DM

By Sandra L. Crowley

Ubiquitous is a real word. I thank a former Total Quality Coach for my first exposure some years ago to its existence. My version of Webster's dictionary defines ubiquitous as "present, or seeming to be present, everywhere at the same time; omnipresent." While I believe that God is omnipresent, I have come to discover that CM and DM are present everywhere. Oh, yes; I define CM as Configuration Management and DM as either Data or Document Management.

Ten years ago, I had my first introduction to the CM world. I had an opportunity to do CM for the Space Station effort at the NASA Lewis Research Center. I learned that CM was a discipline that had four areas of focus: identification, control, status accounting, and verification. I was certified as a CMII graduate and was indoctrinated about clear, concise, and valid. Off I went into a world of entirely new experiences. I was exposed to change requests and change boards first hand. I also learned about implementation of changes, and then of technical and CM requirements.

In the past ten years, I have come to see CM and DM in several environments. At NASA, the discipline is often applied to project requirements, documentation, hardware, and software. Though it is applied also to facilities, computers, and other areas.

NASA achieved ISO 9001 certification at all of its Centers and Headquarters in 1998-1999. For certification, CM and DM apply to processes, documentation, and data. Certification requires three occurrences: 1) document what you do, 2) do what you document, and 3) have evidence to prove it. The first item directly links to DM, and 16 of the 20 ISO 9001 elements state: "The supplier shall establish and maintain documented procedures." A key element (4.5) of the standard is entitled Document and Data Control. This element covers having procedures, review of documentation, a master index, no obsolete documents, and changes processed as the original. These requirements cannot be met without effective CM and DM. Further, without records (data), it is not documented, it did not happen.

One of my opportunities was to serve as a recorder to a Source Evaluation Board (SEB). When NASA enters into a contract that is over a certain dollar amount, there is a process of evaluating offeror submittals to reach the selection of a contractor. I applied CM and DM principles to this process. The statement of work requirements were traced and documented throughout the process—from creation, through the evaluation criteria, through all the reviews, through all the findings, to the final selection.

I am often asked what I do at NASA. I say I am a Configuration Management Specialist, and I remark that they now know exactly what I do. Defining CM and DM to a lay person is an interesting experience. I try to relate the disciplines to some simple object familiar to them. They usually nod that they understand, but I really do not think they have the foggiest idea of what CM and DM entail.

I had the precise example for my parents one day. My father is a member of a model railroad club that takes displays to various events. The display is a combination of modules that are built by members individually. Modules are then combined in various ways to fit the space allocation of the event in which they are participating. The club has chosen to go from a 2-track layout to a 3-track layout. In order for the modules to have a functional third track, requirements have to be identified, controlled, and verified so that the model train will go around the display without any disruptions.

Personally, I have concepted and am defining a Christ-centered ministry. Home Alone will help those who are physically and functionally alone. The words "physical" and "functional" are descriptive of requirements and audits. Here again I see aspects of my training in CM and DM as they apply to an organization's structure, mission, and vision.

In a recent Cleveland Plain Dealer newspaper, the employment section featured an article on the perspective of job satisfaction. "Professional organizers manage document flow" prompted one of my co-workers to note: "Sounds like ISO/CM to me!" Yes, that is a piece part of CM and DM. I want to say to the National Association of Professional Organizers: "Hey, we have the knowledge and tools." But I believe CM and DM take things much farther than just organizing.

The ACDM, itself, has applied CM and DM to its organizational structure, its procedures, and its conferences. Some of my professional contacts in this association have 20-30 years experience, and they say they are still learning new things.

Speaking of learning new things, I am currently involved in a NASA-funded program called Intelligent Synthesis Environment (ISE). The program's long-term goal is to develop the capability for personnel at dispersed geographic locations to work together in an immersive virtual environment, using computer simulations to model the complete life-cycle of a product/mission with near real-time response time before commitments are made to produce physical products. My current roles are to do documentation at a program sub-level and to survey CM Tools. I expect to influence the use of CM and DM program-wide. I also hope to expand CM and DM capabilities within this new environment and bring this new environment to the CM and DM applications in which I am affiliated.

Yes, CM is identification, control, accounting, and verification. Yes, DM is requirements, data, and documentation. Yes, CM and DM are many things to many people in many applications—work projects, business processes, hobbies, organizations, personal endeavors. And, yes, CM and DM are ubiquitous.

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